

B.Sc. T.Y. (CBCS Pattern) Sem-V
USBCDST-11 - Biochemistry Paper-III : Nutritional Biochemistry

P. Pages : 2

Time : Three Hours



GUG/W/22/13113

Max. Marks : 50

- Notes : 1. All questions are compulsory.
2. All questions carry equal marks.

1. What is energy input? Describe in detail factor affecting energy input. **10**

OR

- a) Discuss the measurement of energy expenditure by direct calorimetric method. **2½**
- b) Discuss basal metabolic rate. **2½**
- c) Write a note Recommended Dietary Allowances for different age groups. **2½**
- d) Discuss the role of nutrients on human health. **2½**

2. Discuss in detail Dietary requirements of various nutrients and dietary source of carbohydrates. **10**

OR

- a) Write a note on Essential Fatty Acids. **2½**
- b) Write a note on cholesterol in body **2½**
- c) What is Dietary fiber? Discuss role of fiber in lipid metabolism. **2½**
- d) Write a note on Monosaturated, Polyunsaturated and Saturated Fatty Acids. **2½**

3. Discuss in details functions of proteins in the body. **10**

OR

- a) Write a note on Essential and Nonessential amino acids. **2½**
- b) Discuss amino acid pool and its significance on protein metabolism. **2½**
- c) Discuss the role of iron in prevention of anemia. **2½**
- d) Discuss role of Calcium, Phosphorus on human health. **2½**

4. Discuss in detail fat soluble vitamin **10**

OR

- a) Write a note on vitamin B12. **2½**
- b) Give clinical significance of folate. **2½**
- c) Write a note on clinical importance of niacin. **2½**
- d) Explain the role of Vitamin E as antioxidant. **2½**

5. Solve **any ten** of the following.
- i) Define nutrition. 1
 - ii) What is resting metabolism? 1
 - iii) Give full form of BMR 1
 - iv) What is normal blood glucose level? 1
 - v) Give one example of lipoprotein. 1
 - vi) Name one disorder which is due to deficiency of any essential fatty acid. 1
 - vii) Define high quality proteins. 1
 - viii) Give cause of Kwashiorkor 1
 - ix) Name the disorder occurs due to Iodine deficiency. 1
 - x) Give chemical name of vitamin K 1
 - xi) Give the precursor of Niacin. 1
 - xii) Give the dietary source of vitamin B6. 1
